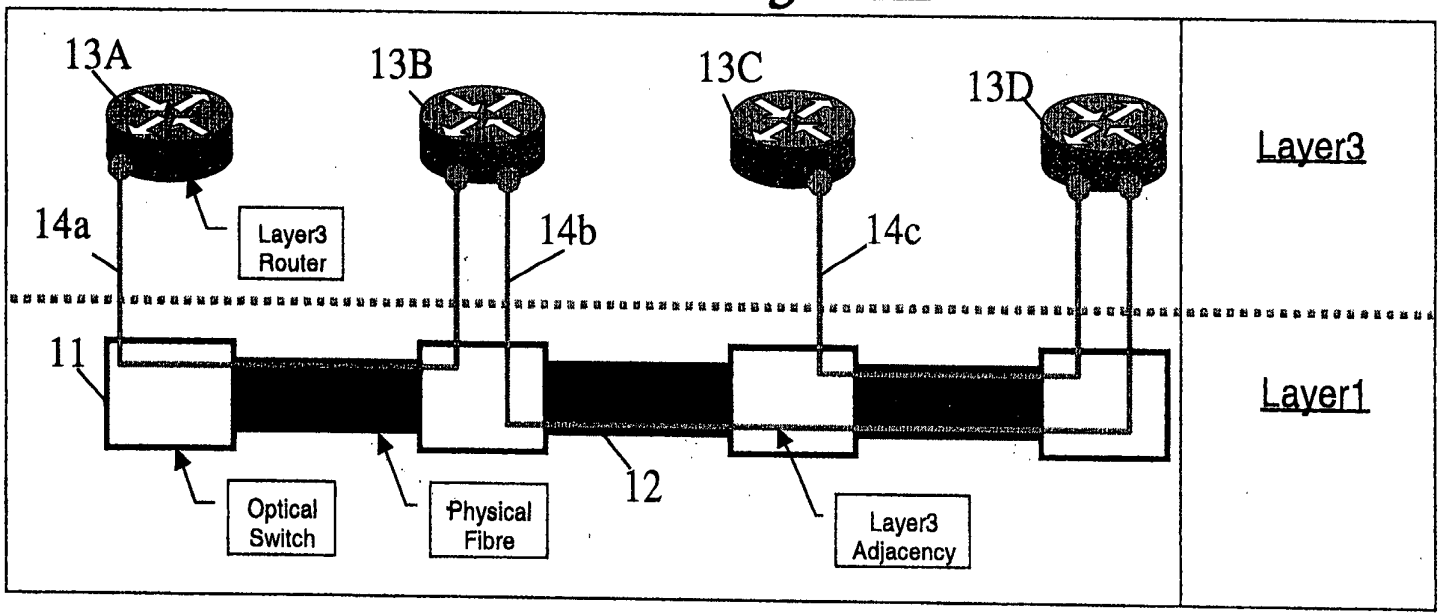
Figure 1a



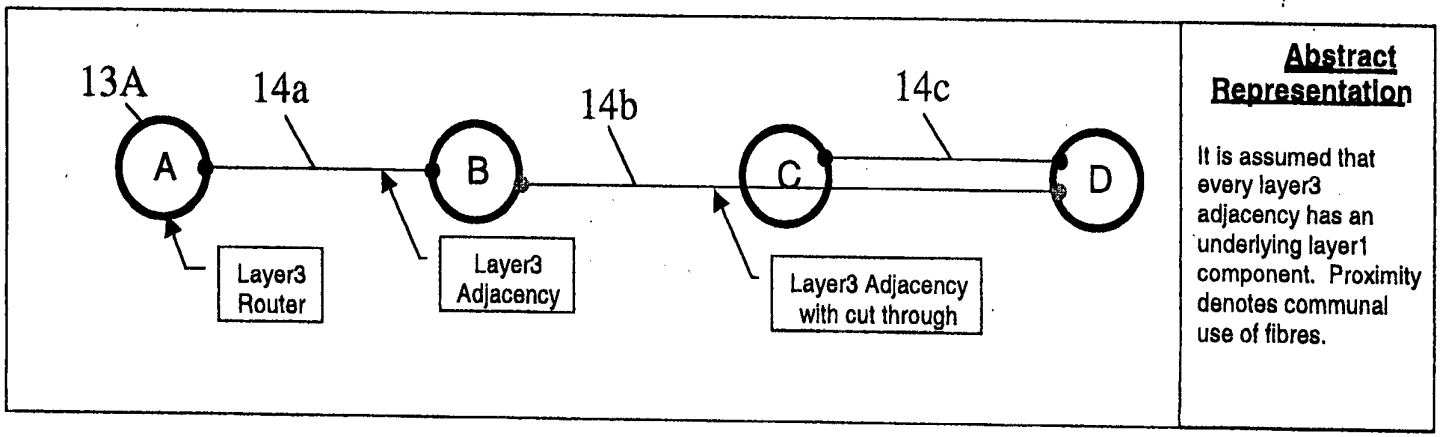


Figure 1b

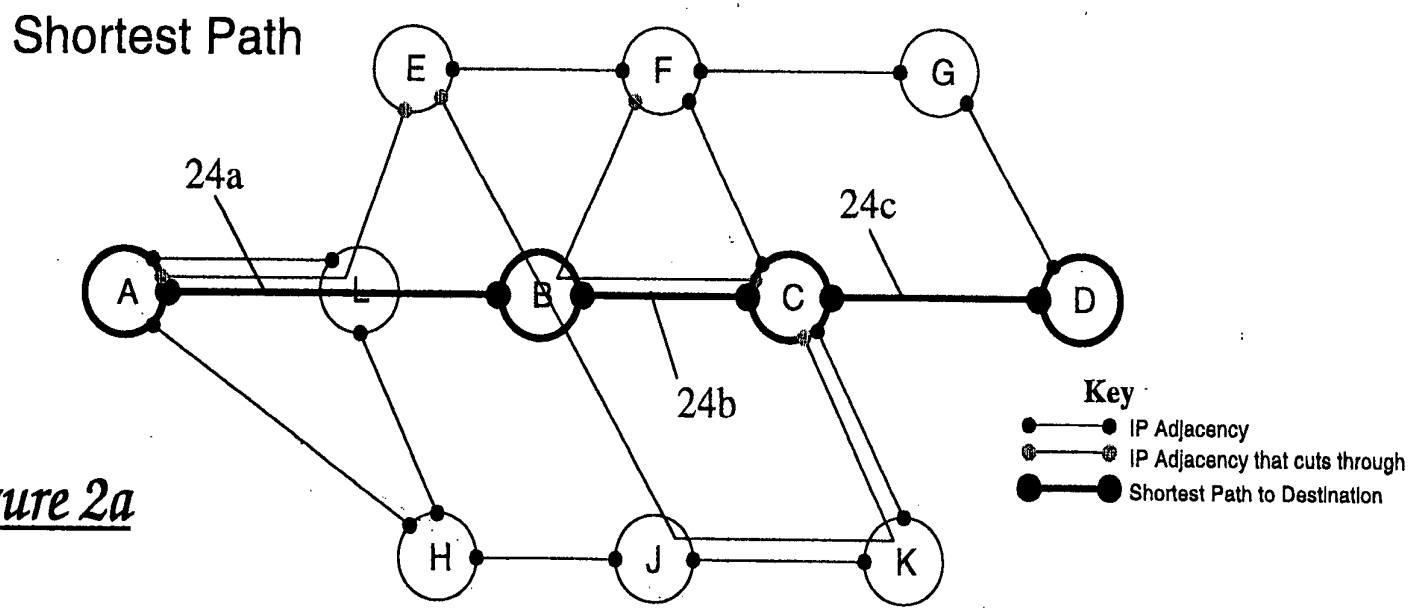


Figure 2a

	Shortest Path	Protection Path		Adjacencies Broken					
Protection level 7	A B C D	A E C	A-B						
Protection level 6	A B C D	A E C	A-B	B-C					
Protection level 5	A B C D	A E F C	A-B	B-C	C-F	C-E			
Protection level 4	A B C D	A H J K C	A-B	A-E	A-L				
Protection level 3	A B C D	A H J K C	A-B	A-E	A-L	B-C	C-F	C-E	
Protection level 2	A B C D	A E C	A-B	A-L	B-C	C-F	C-E	H-L	
Protection level 1	A B C D	A H J K C	A-B	A-E	A-L	B-C	C-F	C-E	H-L

Figure 2b

Layer 3 element of network

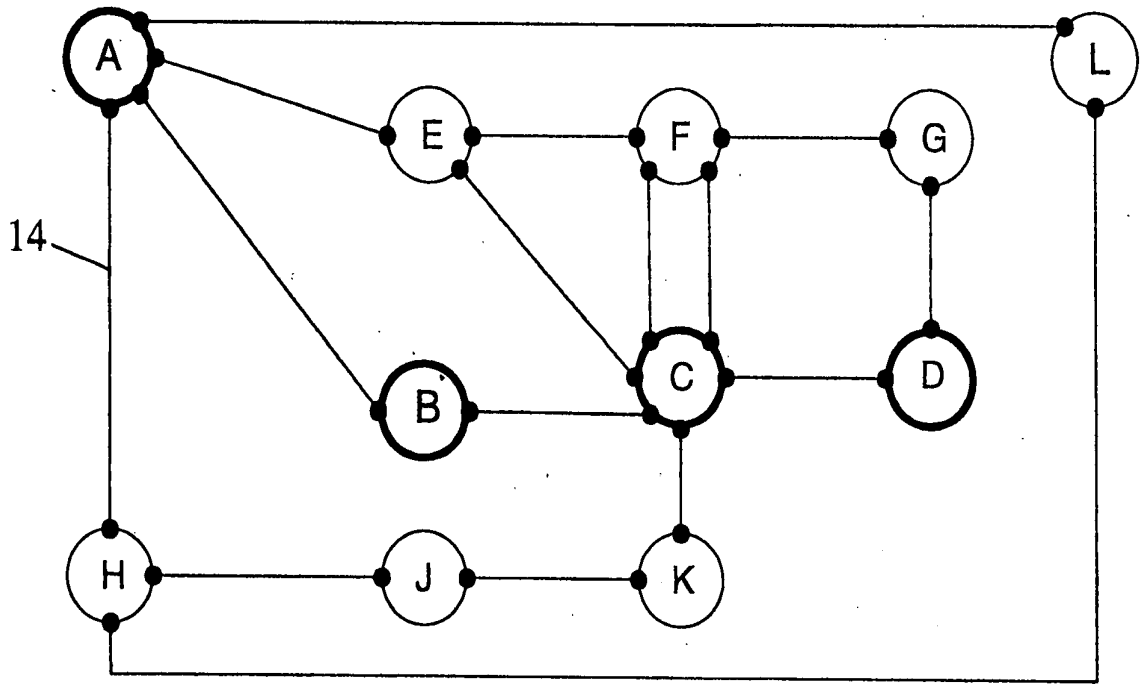


Figure 3a

Layer 1 element of network

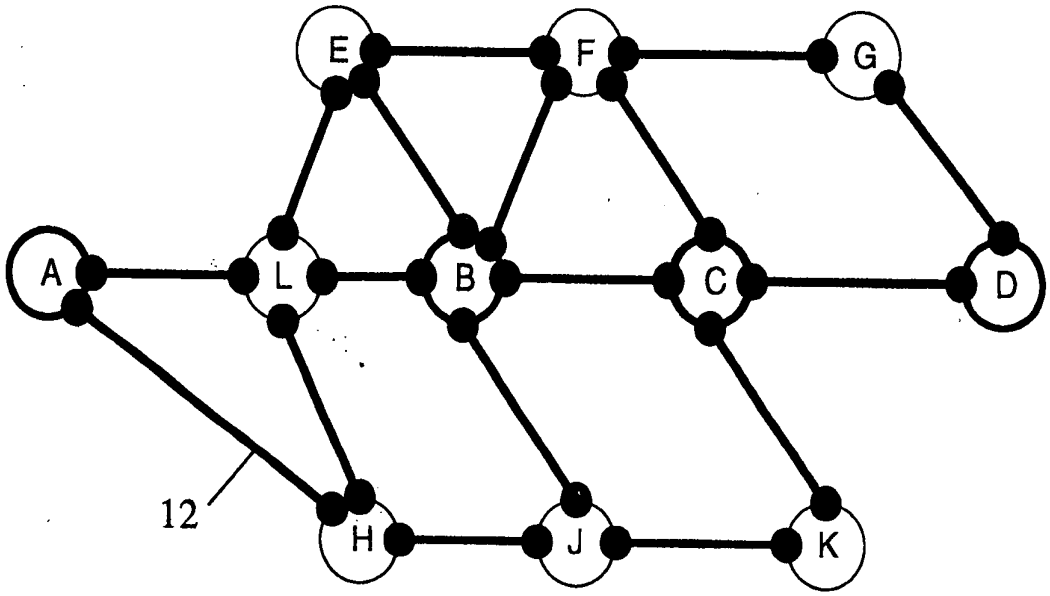


Figure 3b

Combined network diagram

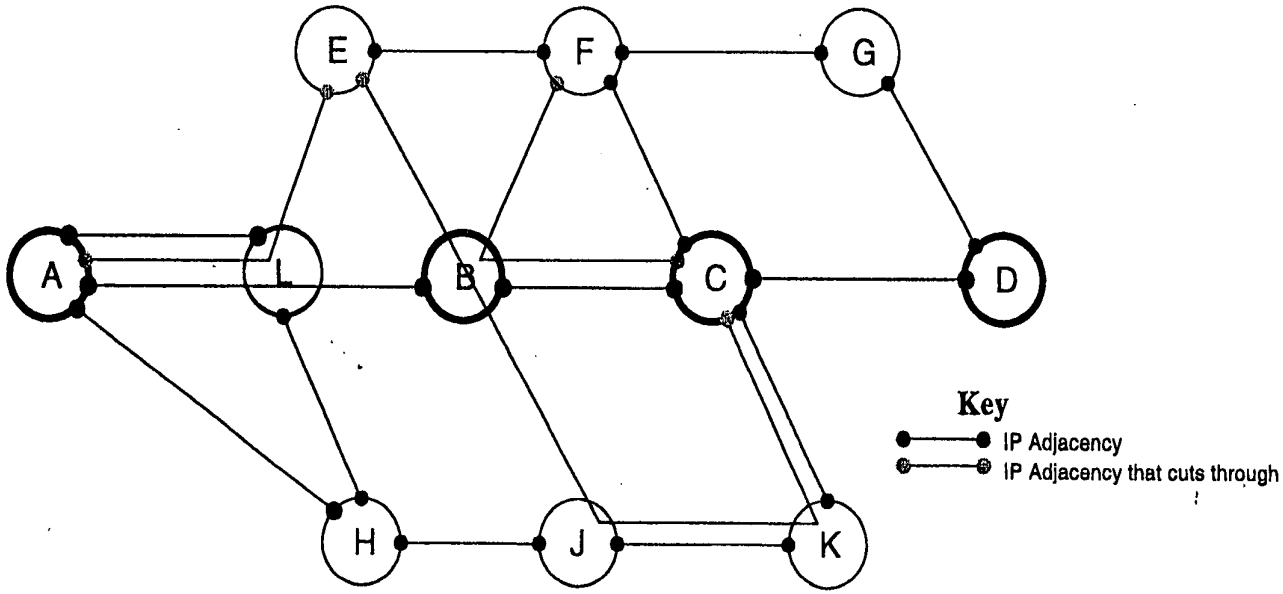


Figure 3c

Level 1=switch protection

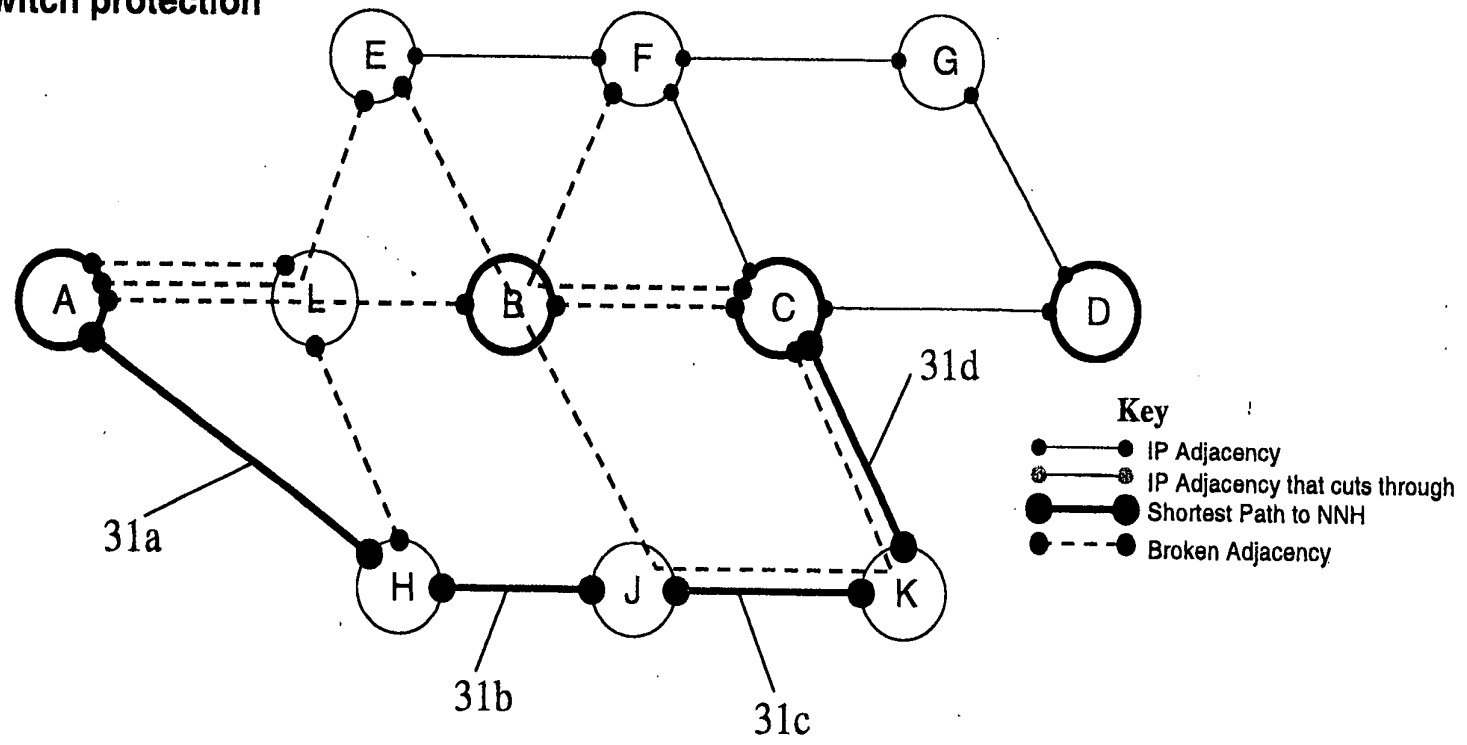


Figure 4

Level 2= router protection

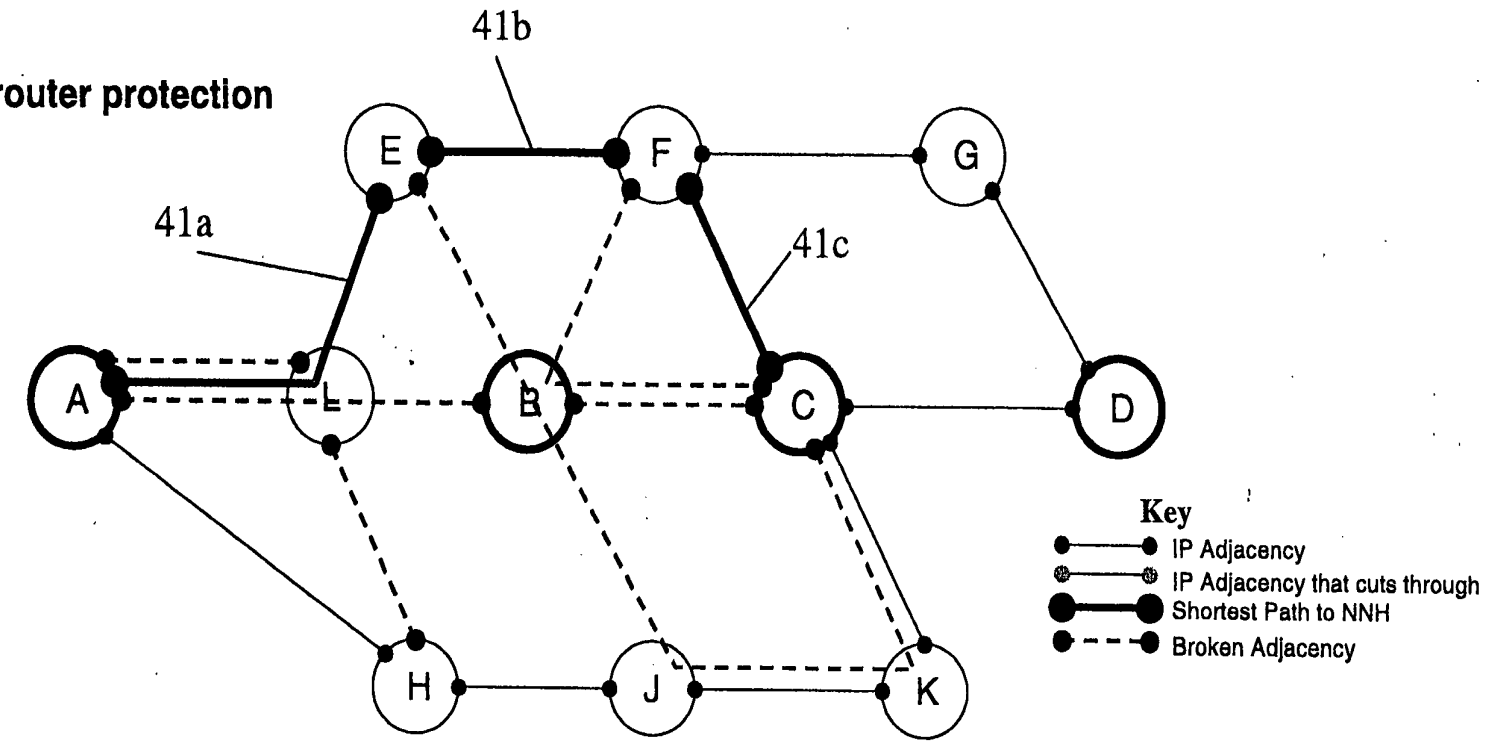


Figure 5

Level 3=fibre protection

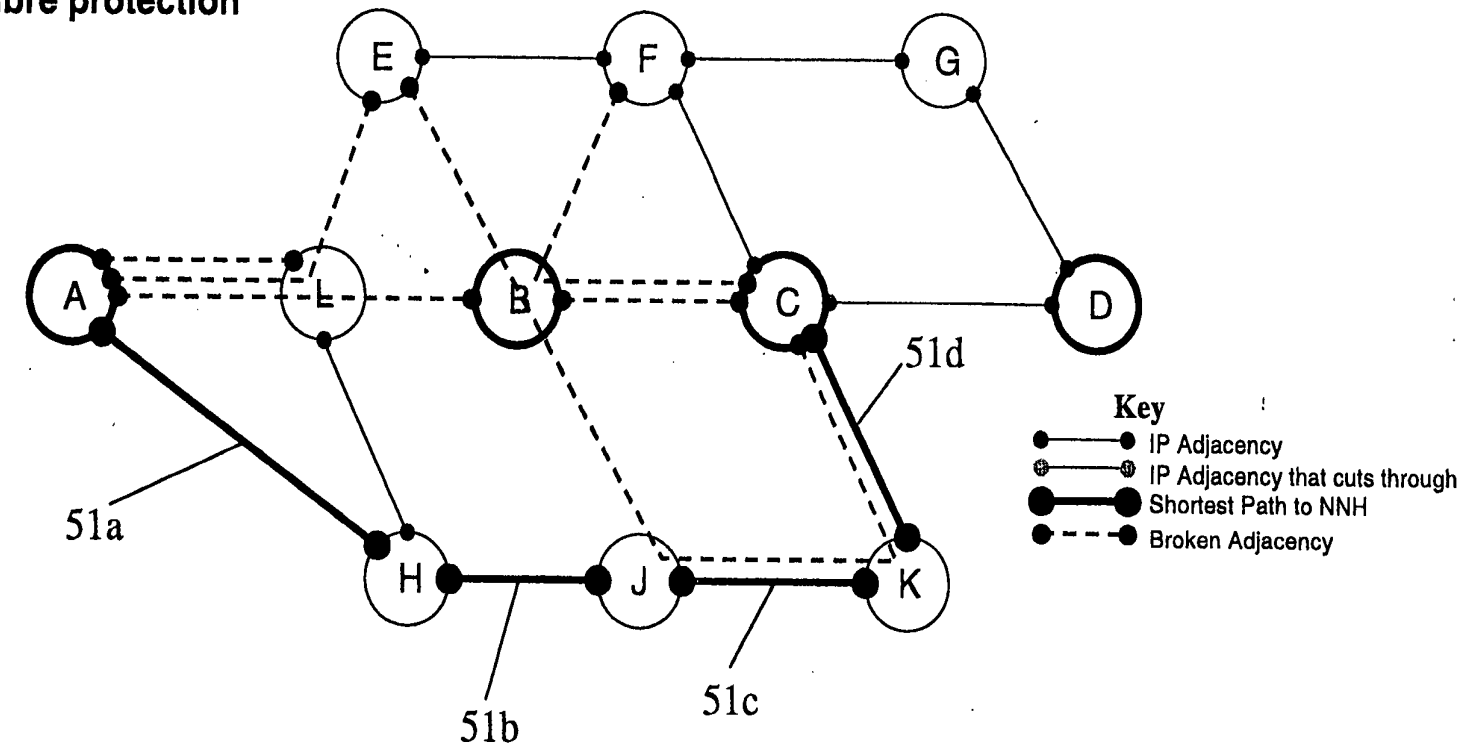


Figure 6

Lev l 4=fibre protection

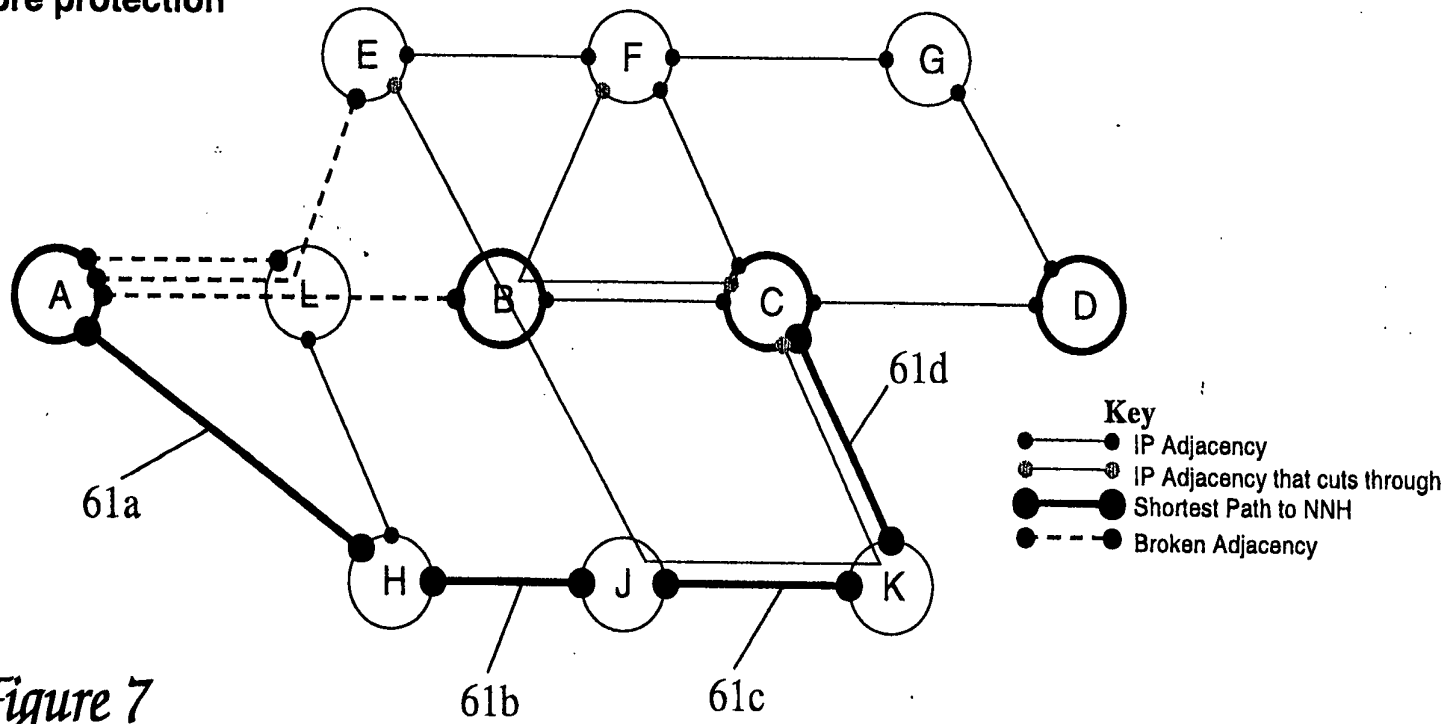


Figure 7

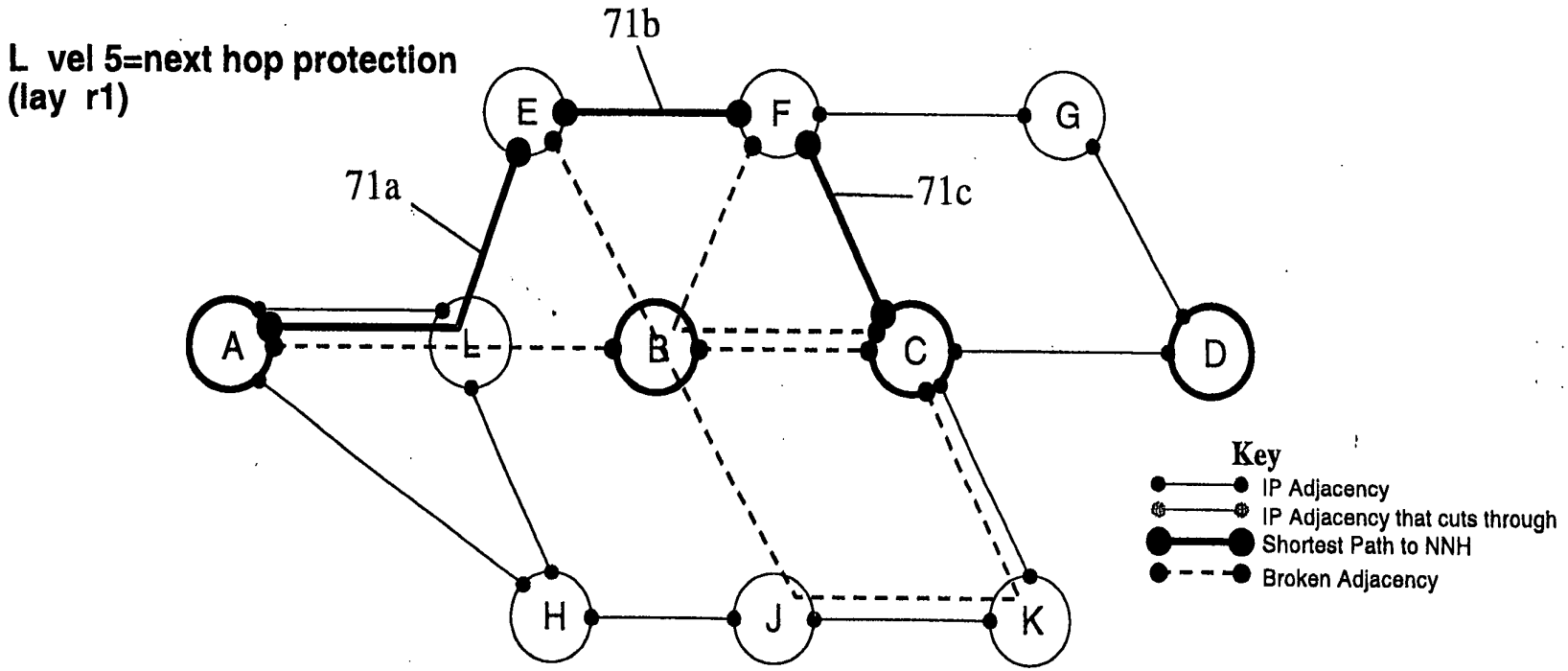

L vel 5=next hop protection
(lay r1)
71b
71a
71c
E
F
G
A
L
B
C
D
H
J
K
Key
IP Adjacency
IP Adjacency that cuts through
Shortest Path to NNH
Broken Adjacency

Figure 8

Level 6= next hop protection (layer3)

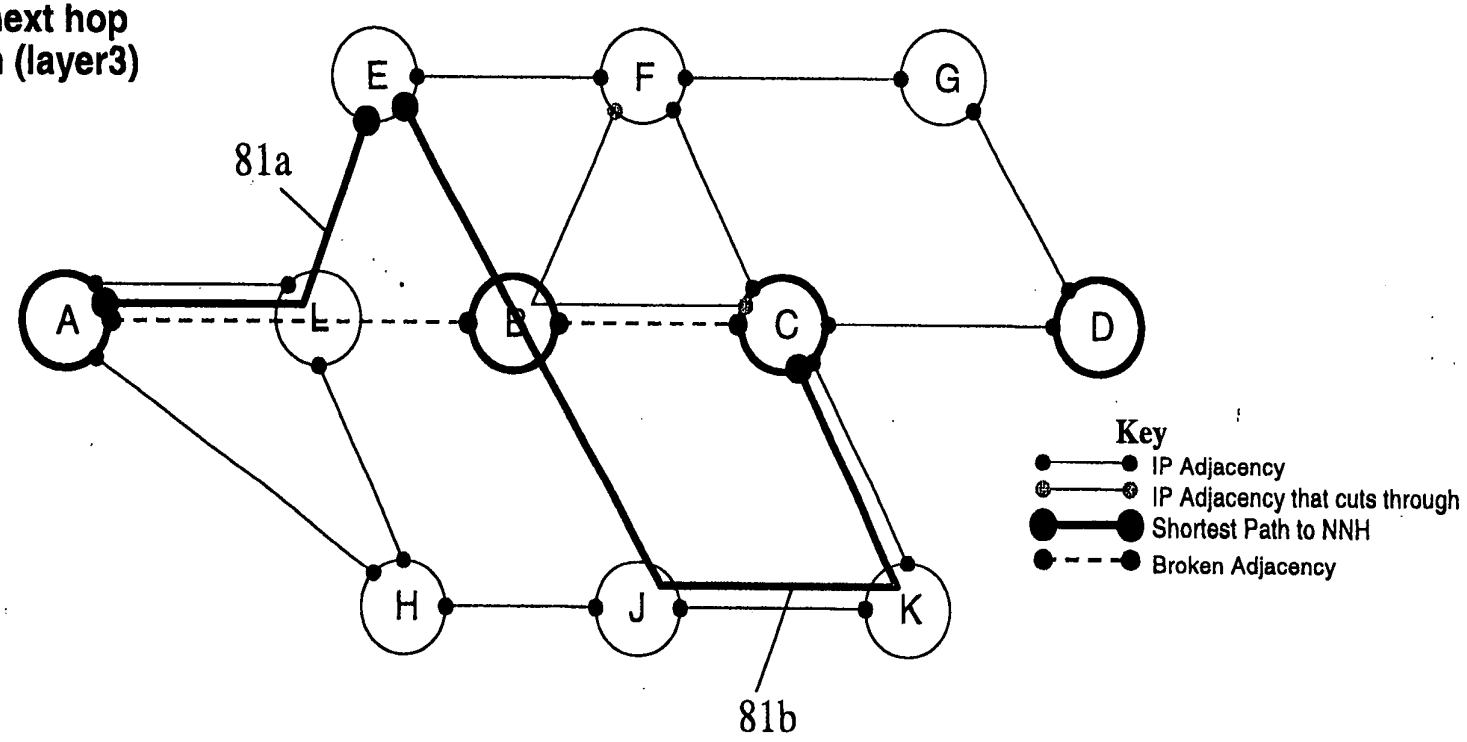


Figure 9

Level 7=next hop adjacency protection

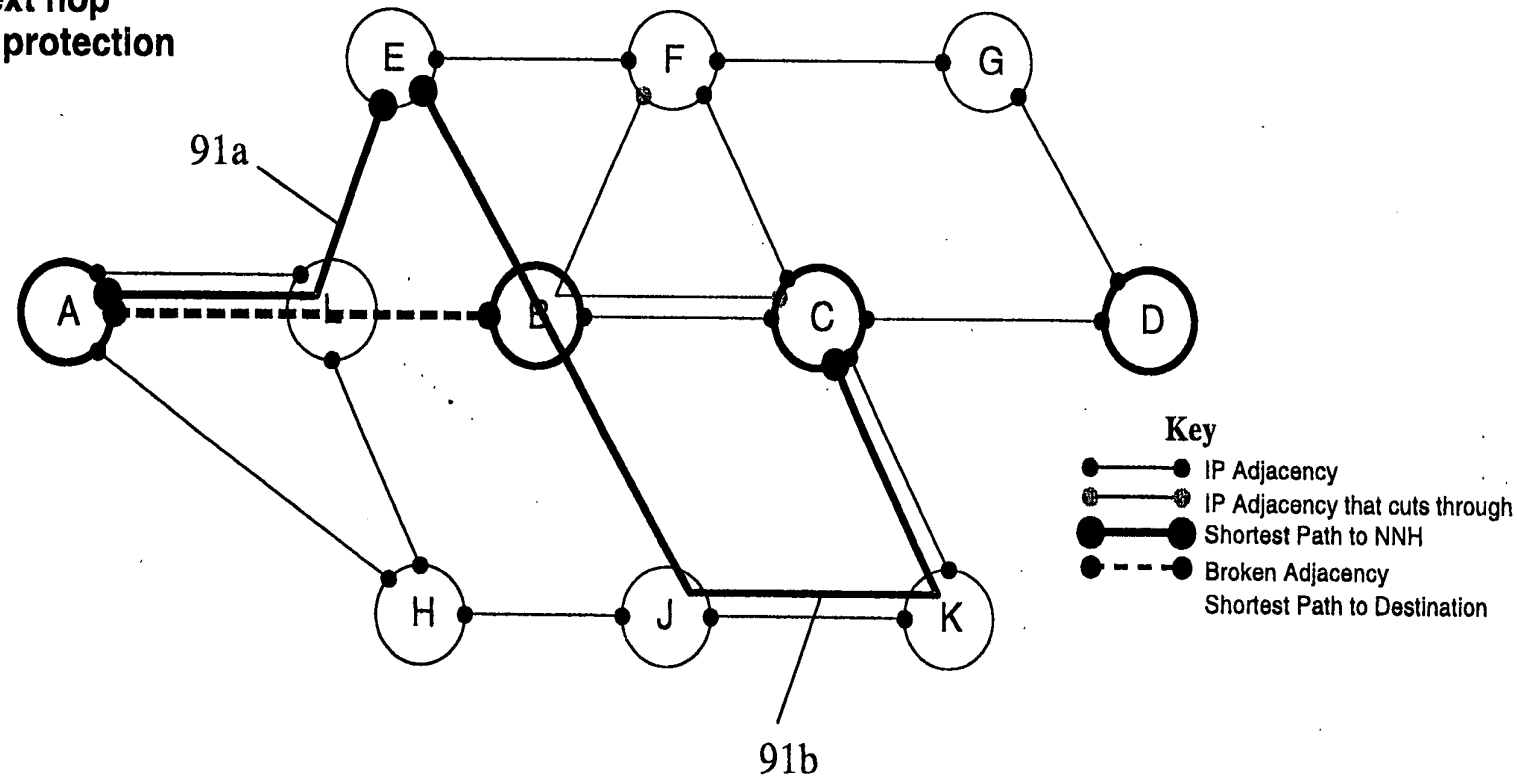


Figure 10

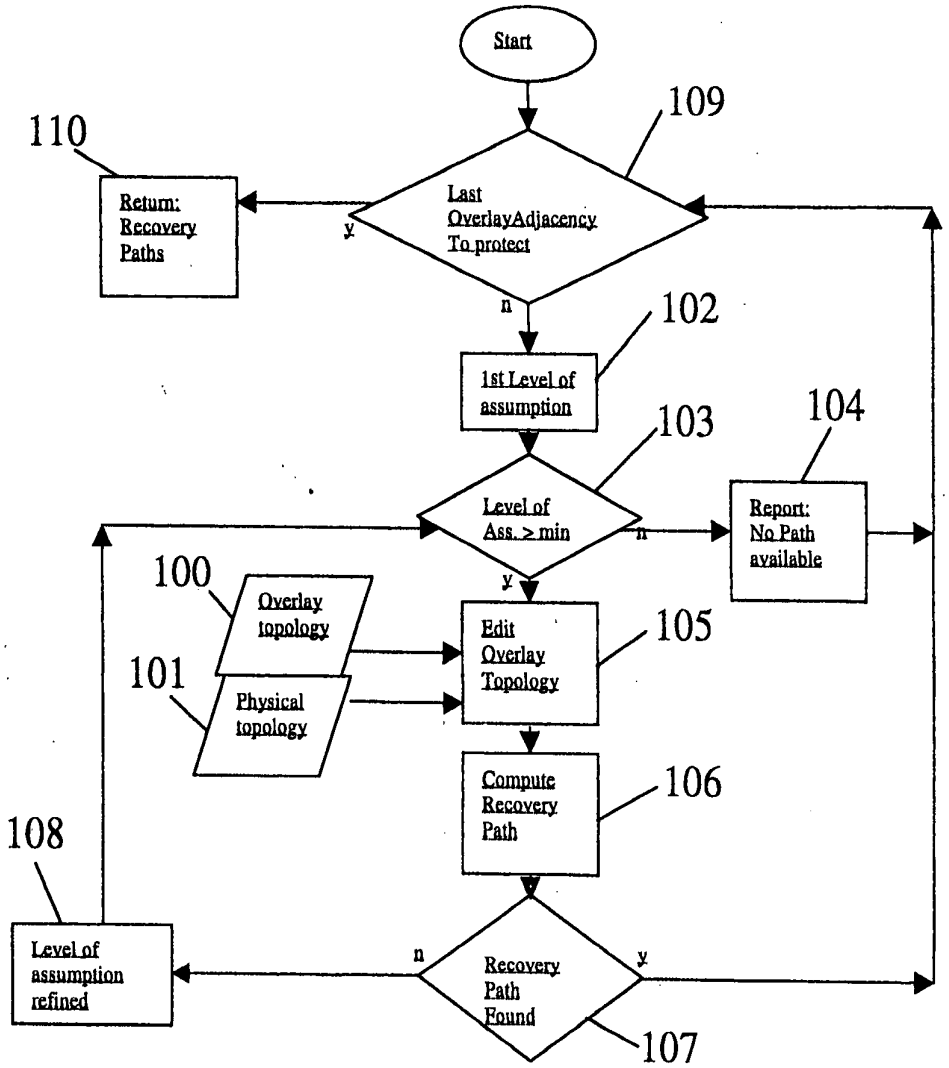

Start
109
110
Return:
Recovery
Paths
Last
OverlayAdjacency
To protect
y
n
102
1st Level of
assumption
103
104
Level of
Ass. > min
n
Report:
No Path
available
y
100
Overlay
topology
101
Physical
topology
Edit
Overlay
Topology
105
Compute
Recovery
Path
106
108
Level of
assumption
refined
n
Recovery
Path
Found
y
107

Figure 11